

## CLAIMS

1. Cosmetic composition containing, in a suitable cosmetic foundation, at least one block polymer having at least a first block which is a polyol selected from polyethers, oligoethers, hydrocarbons having a molecular weight of at least 400 g/mol and at least two alcoholic hydroxyl groups, oligoester diols and polyesters of dicarboxylic acids with diols, and at least two additional blocks which are polyesters of hydroxycarboxylic acids or their lactones.

2. Composition according to Claim 1, characterised in that the block polymer

- a) has at least one hard segment with a first transition temperature  $T'_{\text{trans}}$  which lies above room temperature, and
- b) has at least one soft segment with a second transition temperature  $T_{\text{trans}}$  which lies below  $T'_{\text{trans}}$ .

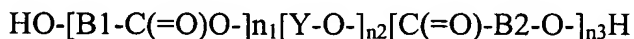
3. Composition according to one of the preceding Claims, characterised in that the block polymer has the formula  $A(B)_n$  wherein A is derived from an n-valent polyether or oligoether, from hydrocarbons having a molecular weight of at least 400 g/mol and n alcoholic hydroxyl groups, from oligoester diols or from a polyester of a dicarboxylic acid with one diol, B represents a poly(hydroxycarboxylic acid) block and n represents a number larger than or equal to two.

4. Composition according to Claim 3, characterised in that

- A is selected from polyalkylene glycol ethers of polyvalent alcohols, poly(tetrahydrofurane), dimerdiol, dimerdiol oligoethers, oligoester diols,
- B is selected from poly( $\epsilon$ -caprolactone), poly(pentadecanolactone), polylactides, polyglycolides, poly(lactide-co glycolide) and
- n is 2, 3 or 4.

5. Composition according to one of the preceding Claims, characterised in that the block polymer has a single polyol block as the middle block, two terminal polyester blocks of hydroxycarboxylic acids or lactones thereof with terminal alcoholic hydroxyl groups.

6. Composition according to Claim 5, characterised in that the block polymer has the general formula



wherein B1 and B2 are the same or different and stand for branched, cyclic or linear alkylene groups with 1 to 40 C atoms, Y stands for a branched, cyclic or linear alkylene group with 2 to 30 C atoms or for a polyester block of dicarboxylic acid and diol and  $n_1$ ,  $n_2$  and  $n_3$  are the same or different numbers larger than zero.

7. Composition according to Claim 6, characterised in that B1 and B2 stand for branched, cyclic or linear alkylene groups with 2 to 20 C atoms and Y stands for ethylene groups and / or propylene groups.

8. Composition according to Claim 7, characterised in that B1 and B2 stand for branched or linear alkylene groups with 2 to 20 C atoms, Y stands for an ethylene group and  $n_1$ ,  $n_2$  and  $n_3$  are selected in such a way that the molecular weight of the block polymer is greater than or equal to 2,000.

9. Composition according to one of the preceding Claims, characterised in that the block polymer has a degree of crystallinity of from 3 to 80 % and that the ratio of the moduli of elasticity below and above  $T_{\text{trans}}$  is at least 20.

10. Composition according to one of the preceding Claims, characterised in that the block polymer is contained in an amount of from 0.01 to 25 percent by weight.

11. Composition according to one of the preceding Claims, characterised in that at least one additional active ingredient, in the amount of 0.01 to 25 percent by weight, is contained, said active ingredient being selected from hair-care substances, hair-fixing substances and hair-colouring substances.

12. Cosmetic substance containing a composition according to one of the Claims 1 to 10, characterised in that it is present in the form of a lotion, a spray lotion, a cream, a gel, a foam-gel, an aerosol spray, a non-aerosol spray, an aerosol foam, a non-aerosol foam, an o/w or w/o emulsion, a micro-emulsion or a hair wax.

13. Use of block polymers of at least a first block, which block is a polyol selected from polyethers, hydrocarbons having a molecular weight of at least 400 g/mol and at least two alcoholic hydroxyl groups, dimerdiol or derivatives derived from dimerdiol and polyesters of dicarboxylic acids with diols and at least two additional blocks which are polyesters of hydroxycarboxylic acids or lactones thereof, for the purpose of hair treatment.

14. Method for hair treatment, wherein  
a composition according to one of the Claims 1 to 10 is applied to the hair,  
before, simultaneously or subsequently the hair is arranged into a defined  
shape under the application of heat and  
subsequently the shape is fixed by cooling.

15. Method according to Claim 14, characterised in that the shaping of the hair occurs under heating to a temperature of at least  $T'_{trans}$  and that the subsequent fixing of the shape of the hair is achieved by means of cooling to a temperature below  $T'_{trans}$ .

16. Method for hair treatment, wherein  
a first hairstyle (permanent shape) created by a method according to Claim 14 or 15 is heated to a temperature between  $T'_{trans}$  and  $T_{trans}$ ,

the hair is brought into a second (temporary) shape and  
the second shape is fixed by means of cooling to a temperature below

$T_{\text{trans}}$ .

17. Method for the recovery of a hairstyle (permanent shape) previously programmed by means of a method according to one of the Claims 14 to 15, wherein a hairstyle in a temporary shape according to Claim 15 or a hairstyle deformed by means of cold forming is heated to a temperature above  $T_{\text{trans}}$ .

18. Method for converting a hairstyle previously created by a method according to Claim 14 or 15 into a new hairstyle, wherein

the hairstyle is heated to a temperature above  $T'_{\text{trans}}$

the hairstyle is brought into a new shape and

the new shape is subsequently fixed by means of cooling to a temperature  
below  $T'_{\text{trans}}$ .